

Serial No.: 09/807,657
Group Art Unit No.: 1648

42, 44, 47-52, 71-92, and 116 have been amended herein. Support for these amendments can be found on page 5, lines 5-10 of the specification as well as in the Examples. Thus, no new matter has been added.

In view of the following amendment and response, the Applicant believes the claims presented herein are allowable. Reconsideration is respectfully requested.

STATUS OF THE APPLICATION

The Application is a 371 of PCT/EP99/07764 originally filed October 8, 1999, which claimed priority to GB9822703.6, GB9822709.3, and GB9822712.7 all having filing dates of October 16, 1998.

SPECIFICATION OBJECTIONS

Objection to disclosure on page 4, lines 6-7 of the application is withdrawn based on correction in the previous response.

The specification is objected to for failing to provide proper antecedent basis for the claimed subject matter. The Examiner suggests the insertion of an additional sentence disclaiming saponin-derived immunostimulants at the end of the last paragraph of page 5 to overcome the rejection. Applicant respectfully submits the specification discloses in several places various examples of immunostimulants, including Monophosphoryl lipid A, CpG, and saponins, see page 6 of the specification. Applicant respectfully submits that the specification does not lack proper antecedent basis for not disclaiming one of these immunostimulants. Applicant respectfully requests that this objection be withdrawn.

The specification is also objected to for allegedly failing to provide any antecedent basis for the claim limitation "characterized in that said metallic salt is substantially free of monophosphoryl lipid A or a derivative thereof." The Examiner concedes that the specification supports the limitation that the antigen/metallic salt is free from immunostimulant. However, the Examiner alleges that the specification does not support a complex where an immunostimulant

Serial No.: 09/807,657
Group Art Unit No.: 1648

other than MPA is absorbed to the salt. Applicant has amended the application at page 3 to include a description of the immunostimulant as MPA. Applicant respectfully submits that MPA was included in the examples of possible immunostimulants in the last paragraph on page 5 of the specification as originally filed. Furthermore, Applicant has clarified by amendment that the antigen/metallic salt complex is free of immunostimulant of the first complex, which the Examiner concedes is supported in the specification as filed. Thus, no new matter has been added.

CLAIM OBJECTIONS

Objection to claim 42 as being in improper form because a multiple dependent claim must refer to the multiple dependent claim from which it is depending in the alternative form has been withdrawn.

Claim 47 is objected to. The Examiner recommends that the last phrase be rewritten to recite "or a derivative thereof." Applicant has amended this claim herein and removed the phrase "or derivative of" for other reasons which will be discussed herein. Thus, objection to this phrase in the claim is moot.

REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Prior Rejection Withdrawn

In the previous Office Action claims 32-37 were rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention. In particular, the Examiner alleged that the specification teaches that the immunostimulants of the invention include plant-derived saponins. page 5, lines 17-21. The Examiner also alleged that the specification does not teach any reason for the exclusion of saponins from the meaning of the words immunostimulants in the claims.

Serial No.: 09/807,657
Group Art Unit No.: 1648

In the most recent Office Action, the Examiner has withdrawn the rejection of claims 32-37 under 35 U.S.C. §112, first paragraph, but notes the objection to the specification. The Examiner alleges that the limitations to amended claim 32 is not disclosed in the specification but is disclosed in the claims as originally filed. Applicant respectfully submits that the specification disclosed several immunostimulants including saponin-derived immunostimulants and need not disclaim saponin-derived immunostimulants to be in proper form. Applicant requests withdrawal of this objection.

New Rejection

Claims 32-35, 39-43, 71, 72, 82, 83, 93, 94, 104, 105, 116, 117 are rejected under 35 U.S.C. §112, first paragraph, for allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention. In particular, the Examiner alleges that as amended claims 32, 39, 116 and 117 assert that immunostimulants may act as an antigen. The Examiner also alleges that the specification as filed does not support the assertion that an immunostimulant may be an antigen. Thus, the Examiner alleges that amended claims constitute added matter.

Claims 32, 39, 42 and 116, have been amended herein to no longer recite the language that an immunostimulant "may be a first antigen." Applicant respectfully submits that as amended these claim are in condition for allowance. Claim 117 has been cancelled herein, thus, rendering the rejection of this claim moot. Furthermore, as claims 33-35, 40-43, 71, 72, 82, 83, 93, 94, 104, and 105 depend from one of these amended claims, they too are in condition for allowance.

Serial No.: 09/807,657
Group Art Unit No.: 1648

New Rejection

Claims 32-40, 42 43, 116, 117 are rejected under 35 U.S.C. §112, first paragraph, because the specification while being enabling for compositions comprising an immunostimulant and an antigen, does not allegedly provide enablement for such compositions wherein said immunostimulant and antigen are the same. In particular, the Examiner alleges that Applicant has not shown that the immunostimulants are antigenic or that the skilled artisan would vaccinate a person with immunostimulants.

Claims 32, 39, 42 and 116 have been amended herein to no longer recite the language that an immunostimulant may act as an antigen or that the immunostimulant and antigen may be the same. Claim 117 has been cancelled herein, thus, rendering the rejection of this claim moot. Applicant respectfully submits that as amended these claim are in condition for allowance. Furthermore, as claims 33-40, 43 depend from one of these amended claims, they too are in condition for allowance.

New Rejection

Claims 32-35, 39-43, 71, 72, 82, 83, 93, 94, 104, 105 are rejected under 35 U.S.C. §112, first paragraph, for allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention. In particular, the Examiner alleges that the amended claims which recite that the immunostimulant may comprise an antigen were not supported in the application as originally filed.

Claims 32, 39, 42, and 71-92 have been amended herein to no longer recite the language that an immunostimulant may comprise an antigen or that the immunostimulant and antigen may be the same. Applicant respectfully submits that as amended these claim are in condition for

Serial No.: 09/807,657
Group Art Unit No.: 1648

allowance. Furthermore, as claims 33-38, 40-43, and 93, 94, 104, 105 depend from one of these amended claims, they too are in condition for allowance.

New Rejection

Claims 32-35, 39-43, 71, 72, 82, 83, 93, 94, 104, 105 are rejected under 35 U.S.C. §112, first paragraph, because the specification while being supportive for compositions comprising immunostimulants and antigen does not allegedly provide enablement for compositions where immunostimulant and antigen are the same. In particular, the Examiner notes that in the previous office action the term "other antigen" was allegedly not clear.

Claims 32, 39, 71-92 have been amended herein to no longer recite the language that the immunostimulants of the invention may be an antigen or that the immunostimulant and antigen may be the same. In addition, claims 71-92 no longer recite the term "second antigen." Applicant respectfully submits that as amended these claims are in condition for allowance. Furthermore, as claims 33-38, 40-43, and 93, 94, 104, 105 depend from one of these amended claims, they too are in condition for allowance.

New Rejection

Claims 39, 41-45, 50-55, 60-62, 71-74, 79-85, 90-96, 101-107, 112-114, 117, and 119 are rejected under 35 U.S.C. §112, first paragraph, rejected under 35 U.S.C. §112, first paragraph, because the specification while being enabling for vaccines, and methods of making claimed vaccine compositions wherein antigen is absorbed to a separate metallic salt, it does not allegedly reasonable provide enablement for such compositions where the antigen is not so absorbed. The Examiner alleges that, Applicant has not shown that the antigen which is not bound by a separate metallic salt will not bind to the salt to which the immunostimulant is adsorbed. Citing Hauser (U.S. Patent No. 5,776,468, herein after Hauser), The Examiner alleges that MPA will bind alum

Serial No.: 09/807,657
Group Art Unit No.: 1648

to which an antigen is already bound. The Examiner alleges that the Applicant has not described a method of preventing such binding.

Applicant traverses this rejection and respectfully submit that on page 5, lines 4-16 of the specification a process is described for making a vaccine wherein the antigen and the immunostimulant are mixed with metallic salts separately and then admixed to form a mixture of salts containing antigen and salts containing immunostimulants. Furthermore, Applicant discloses at page 17, lines 23-25 a vaccine in which antigen and immunostimulant are attached to separate salts. Furthermore, a vaccine is provided at page 20, lines 18-29 wherein antigen and immunostimulant are attached to separate salt particles. In contrast, Hauser at column 1, lines 43-53 discloses a mixture of antigen and immunostimulant with salt wherein the immunostimulant may attach to the same salt particle as antigen.

Applicant also respectfully submits that a patent need not teach and preferable omits what is well known in the art. *Hybridtech, Inc. v. Monoclonal Antibodies, Inc.* 231 U.S.P.Q. 81, 94 (Fed. Cir. 1986), see also *Spectra-Physics, Inc. v. Coherent, Inc.* 3 U.S.P.Q.2d. 1737, 1743 (Fed. Cir. 1987) *cert denied* 484 U.S. 954 (1987). Applicant submits that at the time the invention was made it was known in the art that association of a molecule including an antigen or immunostimulant with a metallic salt particle could be influenced by electric charge and or hydrophobicity of the molecule and the salt. Thus, absorption of a molecule to a metallic salt particle could be increased by altering the concentration of free ions in the buffer solution used for admixing or changing surface charges by altering pH. Furthermore, it was understood that an antigen's association with a metallic salt particle could be made selective by saturating the admixture with the antigen. Thus, several techniques were known in the art at the time the invention was made for assuring that an antigen would not bind to the same metallic salt particle to which an immunostimulant was adsorbed.

Serial No.: 09/807,657
Group Art Unit No.: 1648

The Applicant respectfully submits that in view of the forgoing remarks and the claims as amended, the Applicant has overcome the Examiner's rejection under 35 U.S.C. §112, first paragraph, and that rejection should be withdrawn.

REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Prior Rejection Maintained in Part

Claims 32-37, 39-41, and 43-45, 50-62, and 71-114 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner alleges that the claims as written may have multiple interpretations. Specifically, the Examiner indicates that claim 44 still contains the phrase "other antigen."

Applicant respectfully submits that claims 32, 39, 40-42, 44, and 71-114 have been amended to longer recite "other antigen" or "second antigen." Applicant respectfully submits that as amended these claims are now in condition for allowance.

New Rejection

Claims 47 and 57 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner alleges that claim 47 is unclear as to whether the claim includes embodiments where the antigen is adsorbed to a metallic salt to which non-MPA immunostimulant is adsorbed or if the claims exclude all immunostimulants from the antigen/metallic complex.

Applicant has amended claim 47 so that is no longer recites "monophosphoryl lipid A, or derivative thereof." As amended the claim now recites that the second complex is substantially free of the immunostimulant of the first complex. Applicant respectfully submits that as amended the language of claim 47 is clear and it is now in condition for allowance. Support for

Serial No.: 09/807,657
Group Art Unit No.: 1648

this amendment can be found at page 5, lines 5-10 of the specification as well as in the Examples. Similarly, claim 57 depends from claim 47 and is now in condition for allowance.

New Rejection

Claims 73, 74, 79-81, 84, 85, 90-92, 95, 96, 101-103, 106, 107, 112-114 are rejected for including limitations which lack antecedent basis in the claims. The Examiner alleges that in claim 73 there is insufficient antecedent basis for the "second antigen" limitation. The Examiner alleges that because claim 44 from which claim 73 depends recites "other antigens" it is unclear what is meant by the term "second antigen."

Applicant respectfully submits that claims 73-92 have been amended herein to remove the term "second" antigen. In addition, claim 44 has been amended herein to no longer recite "other" antigen. Applicant respectfully submits that claims 73, 74, 79-81, 84, 85, 90-92, 95, 96, 101-103, 106, 107, 112-114 are now in condition for allowance.

New Rejection

Claims 75-81, 86-92, 97-103. and 108-114 stand rejected for including limitations that lack antecedent basis. The Examiner notes that claim 75 recites the limitation "A vaccine composition as claimed in 46, wherein the second antigen." The Examiner notes that claim 46 does not contain the term "second antigen." Applicant respectfully submits that the term "second antigen had been removed from 71-92. Applicant respectfully submits that claims 75-81, 86-92, 97-103. and 108-114 are now in condition for allowance.

The Applicant respectfully submits that in view of the forgoing remarks and the claims as amended, the Applicant has overcome the Examiner's rejection under 35 U.S.C. §112, second paragraph, and that rejection should be withdrawn.

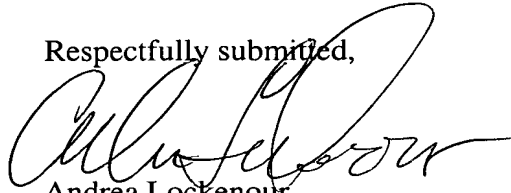
Applicant reserves the right to prosecute, in one or more patent applications, the claims to non-elected inventions, the claims as originally filed, and any other claims supported by the

Serial No.: 09/807,657
Group Art Unit No.: 1648

specification. The Applicant thanks the Examiner for the Office Action and believe this response to be a full and complete response to such Office Action. Accordingly, favorable reconsideration and allowance of the pending claims is earnestly solicited.

If it would expedite the prosecution of this application, the Examiner is invited to confer with the Applicant's undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrea Lockenour', written over the typed name.

Andrea Lockenour
Attorney for Applicant
Registration No. 51,962

GLAXOSMITHKLINE
Corporate Intellectual Property - UW2220
P.O. Box 1539
King of Prussia, PA 19406-0939
Phone (610) 270-7568
Facsimile (610) 270-5090
N:\AVL\patapps\B45158\RoalB45158.doc